

Application No. 10/711,397
Docket No. A4-1800
Amendment dated June 6, 2005
Reply to Office Action of March 4, 2005

REMARKS

In the Office Action, the Examiner reviewed claims 1-20 of the above-identified US Patent Application, with the result that claim 20 was rejected under 35 USC §112, second paragraph, and all of the claims were rejected under 35 USC §103. In response, Applicant has amended the claims as set forth above. More particularly:

Independent claims 1 and 12 have been amended to delete the term "air-insufflated" and to further require that together the outer and inner sole (14,16) define a sole (12) that is flexible in its entirety. Support for this amendment can be found in paragraph [0021] (as numbered by the USPTO authoring software) of Applicant's specification.

Independent claim 1 has been amended to further require air pockets (32) that are defined in the outer sole (14) and contain entrapped air. Support for this amendment can be found in paragraph [0023] (as numbered by the USPTO authoring software) of Applicant's specification.

In view of the amendment to its parent claim 1, dependent claim 7 has been amended to further require that the inner sole (16) closes at least some of the air pockets (32) to entrap the air within. Support for this amendment can also be found in paragraph [0023] (as numbered by the USPTO authoring software) of Applicant's specification.

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Independent claim 12 has been further amended to require a rocker pivot line (34) separating the toe portion (40) from an intermediate portion (38) of the outer sole (14), and that the rocker pivot line (34) is located from an end of the toe portion (40) a distance of about one-third of the total length of the cast shoe (10). Support for this amendment can be found in paragraph [0022] (as numbered by the USPTO authoring software) of Applicant's specification.

Similar to claim 7, dependent claim 20 has been amended to require that the inner sole (16) closes at least some of the air pockets (32) to entrap air within.

Applicant believes that the above amendments do not present new matter. Favorable reconsideration and allowance of claims 1-20 are respectfully requested in view of the above amendments and the following remarks.

Rejection under 35 USC §112, Second Paragraph

Claim 20 was rejected under 35 USC §112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter that Applicant regards as his invention. In response, Applicant has amended claim 20 to delete the offending limitation, and in its place has inserted a limitation that Applicant believes is not indefinite. Consequently,

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Applicant respectfully believes that the basis for rejecting claim 20 is overcome, and respectfully requests withdrawal of the rejection under 35 USC §112, second paragraph.

Rejections under 35 USC §103

Independent claims 1 and 12 and their dependent claims 2-11 and 13-20 were rejected under 35 USC §103(a) as being unpatentable over U.S. Patent No. 5,452,527 to Gaylord in view of U.S. Patent No. 4,899,468 to Richbourg et al. (Richbourg) alone or in further view of U.S. Patent No. 5,918,385 to Sessa, U.S. Patent No. 6,282,818 to Lu, and/or U.S. Patent No. 4,449,307 to Stubblefield. Notably, only Gaylord and Richbourg pertain to casted shoes, with the result that Sessa, Lu, and Stubblefield are not faced with the particular problems faced and overcome by Applicant's invention.

Applicant respectfully requests reconsideration of these rejections in view of the claims as amended and the following comments.

Applicant's invention is directed to shoes of the type to be worn on a casted foot (a "casted shoe"). Applicant's casted shoe (10) is configured to cushion and protect the patient and cast, and to improve the gait pattern of the patient. For this purpose, Applicant teaches that the shoe (10) has a sole (12) with an outer sole (14) that is not rigid but instead is "formed of a tough, soft,

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resilient and flexible material . . . so that the entire sole 12 is flexible”
(paragraph [0021]).

In addition to the outer sole (14), the shoe (10) includes an inner sole (16) overlying and attached to the upper surface of the outer sole (14), a strap (22) located adjacent a heel portion (36) of the outer sole (14) for securing the shoe (10) to a casted foot, and a tread pattern (42) on the lower surface of the outer sole (14). In addition to the heel portion (36) - recited to be of substantially uniform thickness - the outer sole (14) has a tapered toe portion (40) that is thinner than the heel portion (36) such that the lower surface of the outer sole (14) is curved to provide a single rocker bottom function in gait. The outer sole (14) is also required to have air pockets (32). According to Applicant, the air pockets (32) greatly contribute to the flexibility of the sole (12), to the extent that the entire sole (12) is flexible (paragraph [0021]) and the shoe (10) can potentially be bent over onto itself (paragraph [0023]).

Independent claim 1 further requires that the air pockets (32) contain entrapped air. Independent claim 12 further requires that the outer sole (14) defines a rocker pivot line (34) separating the toe portion (40) from an intermediate portion (38) of the outer sole (14), and that the rocker pivot line (34) is located from the end of the toe portion (40) a distance of about one-third of the total length of the cast shoe (10). Independent claim 12 also requires the

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tread pattern (42) to comprise individual raised elements (44) protruding from the surface of the outer sole (14), with each raised element (44) tapering to increase in thickness toward the heel portion (36) of the outer sole (14).

Under a first of the §103 rejections directed to claims 1-3 and 11, the Examiner explained that Gaylord discloses a casted shoe (20) that includes "an air-insufflated outer sole (30), an inner sole (31 and 70), a strap (53), an upper (42), and a tread pattern (32) substantially as claimed except for the exact thickness of the outer sole." The Examiner then cited Richbourg for disclosing a casted shoe 1 "with a uniformly thick heel portion (a and b) and a tapered toe portion (c)," and concluded that it would have been obvious to a person having ordinary skill in the art at the time the invention was made to modify Gaylord's shoe 20 to have an outer sole as taught by Richbourg.

As an initial matter, Gaylord's outer sole 30 is not disclosed as being air-insufflated, as the term "insufflated" is understood according to its ordinary meaning. Because the term "air-insufflated" has been deleted from the claims, Applicant will not address this issue further.

As now amended, independent claim 1 requires that the entire sole (12) (defined by the outer and inner soles (14,16)) is flexible. Neither Gaylord nor Richbourg discloses their soles (30 and 10, respectively) as being flexible

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(or soft, resilient, bendable, etc.), and the materials used by Gaylord and Richbourg ("integrally molded foam material, preferably urethane foam" (Gaylord at column 3, lines 12-14); "polyurethane material" or "light weight rubber or plastic" (Richbourg at column 4, lines 14-29)) do not inherently provide this structural/mechanical characteristic. Accordingly, Gaylord and Richbourg appear to be consistent with Applicant's teachings that

Shoes developed to be worn over a casted foot ("cast shoes") typically comprise a solid rigid sole formed of wood, plastic or layered material [and are] too rigid and solid to flex during the toe-off portion of gait or absorb any impact pressure during the heel-strike portion of gait, leading to a cast wear breakdown rate of about 40%.

Paragraphs [0009] and [0010] of Applicant's specification.

Amended claim 1 also requires that the outer sole (14) has pockets (32) containing entrapped air. Neither Gaylord nor Richbourg discloses an outer sole with air pockets. While claim 7 (which originally recited "air pockets defined in the upper surface of the outer sole") was rejected on the basis of Lu disclosing "air pockets (10) in an outer sole," Lu's air pockets (cavities) 10 are not disclosed as entrapping air, and it is not evident at all how the Lu's cavities 10 could entrap air in view of the fact that Lu's outer sole 1 is held with fasteners 35 to Lu's midsole member 3. Similarly, while Stubblefield was applied against claims 10 and 19 as disclosing "air pockets in the toe portion

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with a greater volume than the heel portion," Stubblefield's air pockets (cavities) are not disclosed as entrapping air, and do not appear to be capable of entrapping air since they are merely covered with a "fibrous board" 15.

Finally, neither Lu nor Stubblefield suggest modifying Gaylord's or Richbourg's soles 30 and 10 to be flexible. Lu's outer sole 1 is inherently required to be formed of a rigid material in order to support the fasteners 35 - if formed of a flexible material, Lu's fasteners 35 would be driven into the foot of the wearer when weight is applied to the outer sole 1. Because Stubblefield does not pertain to a casted shoe, Stubblefield does not overcome Applicant's position that conventional wisdom is to form the sole of a casted shoe from a rigid material.

In view of the above, Applicant respectfully requests withdrawal of the rejection of claims 1-3 and 11 under 35 USC §103.

Under a second of the §103 rejections directed to claims 4-6, the Examiner explained that Gaylord does not disclose Applicant's tread pattern, but then cited Sessa for disclosing "a tread pattern which has tapered 'D-shaped' raised elements (24)," and concluded that it would have been obvious to a person having ordinary skill in the art at the time the invention was made to modify Gaylord's shoe 20 to have a tread pattern as taught by Sessa.

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As with Gaylord, Richbourg, Lu, and Stubblefield, Sessa does not disclose or suggest air pockets (32) containing entrapped air as now required by claim 1, from which claims 4-6 depend. As such, for this reason alone Applicant believes that the invention recited in claims 4-6 are patentably distinguishable over the prior art of record.

Furthermore, Applicant notes that claim 4 (from which claims 5 and 6 depend) requires that "each of the raised elements tapers to increase in thickness toward the heel portion" (emphasis added). In contrast, Sessa's raised elements (lugs) 20 and 26 are not D-shaped but rectilinear-shaped, and the lugs 26 located in the heel portion 16 decrease in thickness toward the heel portion 16.

Finally, because Sessa does not pertain to a casted shoe, Sessa does not overcome Applicant's position that conventional wisdom is to form the sole of a casted shoe from a rigid material.

In view of the above, Applicant respectfully requests withdrawal of the rejection of claims 4-6 under 35 USC §103.

The third and fourth §103 rejections directed to claims 7-10 have already been addressed under the comments regarding the rejection of claims 1-3 and 11, namely, Gaylord, Richbourg, Lu, and Stubblefield do not disclose

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or suggest air pockets containing entrapped air as required by amended claim 1, from which claims 7-10 depend. Therefore, Applicant respectfully requests withdrawal of the rejections of claims 7-10 under 35 USC §103.

Finally, the last two (fifth and sixth) §103 rejections were directed to independent claim 12 and its dependent claims 13-20, based on combinations of Gaylord, Richbourg, Sessa, and Lu (claims 12-18 and 20) and Gaylord, Richbourg, Sessa, Lu, and Stubblefield (claim 19). As noted above, claim 12 recites a rocker pivot line (34) separating the toe and intermediate portions (40,38) and located from the end of the toe portion (40) a distance of about one-third of the total length of the cast shoe (10). While Richbourg was cited as disclosing a casted shoe 1 "with a uniformly thick heel portion (a and b) and a tapered toe portion (c)," Richbourg's tapered toe portion *a* extends greater than half the length of the sole 10, such that any alleged rocker pivot line defined by Richbourg's sole 10 between the heel and toe portions *a*, *b*, and *c* cannot be described as being located from the end of the toe portion *a* a distance of about one-third of the total length of the sole 10 (or shoe 1).

Furthermore, Sessa, Lu, and Stubblefield do not suggest modifying Gaylord's or Richbourg's soles 30 and 10 to be flexible. As discussed above, Lu's outer sole 1 is inherently required to be formed of a rigid material in order

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to support the fasteners 35, and neither Sessa nor Stubblefield pertain to a casted shoe and therefore do not overcome Applicant's position that conventional wisdom is to form the soles of casted shoes from a rigid material.

Finally, and as also discussed above, Gaylord, Richbourg, Sessa, Lu, and Stubblefield do not disclose or suggest air pockets containing entrapped air as required by amended claim 20.

For the above reasons, Applicant respectfully requests withdrawal of the rejections of claims 12-20 under 35 USC §103.

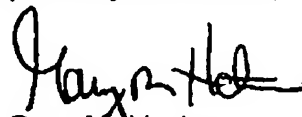
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Closing

In view of the above, Applicant believes that all rejections to his claims have been overcome, and that the claims define patentable novelty over all the references, alone or in combination, of record. It is therefore respectfully requested that this patent application be given favorable reconsideration.

Should the Examiner have any questions with respect to any matter now of record, Applicants'[s] representative may be reached at (219) 462-4999.

Respectfully submitted,

By 
Gary M. Hartman
Reg. No. 33,898

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Hartman & Hartman, P.C.
Valparaiso, Indiana 46383
TEL.: (219) 462-4999
FAX: (219) 464-1166